

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2004/009343

A. CLASSIFICATION OF SUBJECT MATTER
Int.Cl⁷ H01H50/02, 50/04, 50/30

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
Int.Cl⁷ H01H50/02, 50/04, 50/30

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Jitsuyo Shinan Koho 1926-1996 Toroku Jitsuyo Shinan Koho 1994-2004
Kokai Jitsuyo Shinan Koho 1971-2004 Jitsuyo Shinan Toroku Koho 1996-2004

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 2002-42628 A (Matsushita Electric Works, Ltd.), 08 February, 2002 (08.02.02), Full text; all drawings (Family: none)	1-9
Y	JP 5-205594 A (Mitsubishi Electric Corp.), 13 August, 1993 (13.08.93), Claim 1; Fig. 1 (Family: none)	1-9
Y	JP 2003-100189 A (Omron Corp.), 04 April, 2003 (04.04.03), Par. Nos. [0015] to [0017]; Fig. 1 (Family: none)	1-9

☒ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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"&" document member of the same patent family

Date of the actual completion of the international search
10 September, 2004 (10.09.04)

Date of mailing of the international search report
28 September, 2004 (28.09.04)

Name and mailing address of the ISA/
Japanese Patent Office

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Facsimile No.

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PCT/JP2004/009343

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 5-182573 A (Anritsu Corp.), 23 July, 1993 (23.07.93), Par. No. [0025]; Fig. 1 (Family: none)	2
Y	Microfilm of the specification and drawings annexed to the request of Japanese Utility Model Application No. 184470/1981 (Laid-open No. 88752/1983) (Mitsubishi Electric Corp.), 16 June, 1983 (16.06.83), Page 3, lines 4 to 12; Fig. 3 (Family: none)	3
Y	Microfilm of the specification and drawings annexed to the request of Japanese Utility Model Application No. 133775/1972 (Laid-open No. 88265/1974) (Matsushita Electric Works, Ltd.), 31 July, 1974 (31.07.74), Page 1, line 18 to page 4, line 1; drawings (Family: none)	4
Y	JP 56-17877 Y2 (Nippondenso Co., Ltd.), 25 April, 1981 (25.04.81), Page 1, right column, line 11 to page 2, left column, line 1; drawings (Family: none)	5
Y	Microfilm of the specification and drawings annexed to the request of Japanese Utility Model Application No. 48853/1973 (Laid-open No. 149966/1974) (Hitachi, Ltd.), 25 December, 1974 (25.12.74), Full text; all drawings (Family: none)	6
Y	JP 48-89361 A (Matsushita Electric Works, Ltd.), 22 November, 1973 (22.11.73), Claims; Figs. 1, 3 (Family: none)	7
Y	JP 5-298993 A (Matsushita Electric Works, Ltd.), 12 November, 1993 (12.11.93), Par. Nos. [0014] to [0021]; Figs. 1 to 8 & FR 2690562 A1 & DE 4313184 A1 & US 5389905 A	7

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International application No.

PCT/JP2004/009343

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	Microfilm of the specification and drawings annexed to the request of Japanese Utility Model Application No. 25178/1989 (Laid-open No. 115979/1990) (Sanden Corp.), 17 September, 1990 (17.09.90), Claims 1, 2; Fig. 1 (Family: none)	8
Y	JP 1-199033 A (Bridgestone Corp.), 10 August, 1989 (10.08.89), Page 6, lower right column, line 2 to page 7, upper right column, line 18; Fig. 12 (Family: none)	9